

ABSTRACT

Implementation Of Power Supply System Dispenser Drinking Water With Solar Cell

Current technological developments are increasing energy requirements. we have to save electricity, now it is running low (PLN electricity). Renewable energy sources are needed to meet current electricity needs, one of which uses solar energy. Solar cells are used to convert sunlight into electrical energy.

This device uses a three-tier system. First, it consists of solar panels that function as converters of sunlight into electrical energy. Second, there is a battery that stores all the energy that solar panels take from sunlight. Third is an inverter which functions to convert electric current from DC voltage to AC. The results of the experiments that I did get results that are able to flow current of 0.81A, Voltage 223V, and power of 180W using a 7.5A transformer. The 12v 32Ah battery is used to replace the 350w dispenser with a duration of 1 hour 18 minutes. The maximum temperature of the dispenser is 72°C after which the heater turns off, then the heater will turn on again after the temperature reaches $\pm 67^{\circ}\text{C}$.

Keywords: *Renewable energy, Solar cells, Batteries, Inverter, sunlight, power plant.*